



**ENGINEERING OPERATIONS COMMITTEE
MEETING MINUTES
OCTOBER 7, 2004 – 9:00 A.M.
AERONAUTICS COMMISSION ROOM**

Present: L. Tibbits J. Friend J. Polasek
B. O'Brien C. Roberts J. D. Culp
M. Chaput J. W. Reincke T. Fudaly
C. Bleech T. Anderson

Absent: M. VanPortFleet E. Burns

Guests: B. Zimmerman M. Bott T. Frake (for M. VanPortFleet)
P. Steinman D. Weber

OLD BUSINESS

1. Approval of the Minutes of the September 2, 2004, Meeting – L. Tibbits

The minutes of the September 2, 2004, meeting were approved.

2. Work Zone Certification (See November 2, 1995, Minutes, Old Business, Item 4) – B. Zimmerman

In order to improve traffic operations and safety in construction work zones, EOC at its November 1995 meeting approved a recommendation to require a certified work zone supervisor. Subsequently, the requirements for a Work Site Traffic Supervisor (WTS) were developed to improve management of work zones and ensure public and worker safety. After nine years, the concept has seen limited success with the most positive aspect being that the department could go to the assigned WTS and have traffic control corrected.

The Traffic Recommendations Committee (TRC) now advises the elimination of the WTS, which would be replaced with a 24 hour industry contact person for correction of traffic control.

ACTION: The recommendation is approved. This action also ties into Old Business, Item 4.

3. Establishing Speed Limits for Work Zones (See November 5, 1996, Minutes, Old Business, Item 6B) – B. Zimmerman

New guidelines for speed limits in work zones have been developed based on our data and national research, in particular NCHRP Report 196, which suggests that speed limits affect safety and recommends careful consideration in reducing speeds by more than 10 mph. Speed reductions may increase crash rates, especially in urban areas. The TRC recommends approval of the guidelines.

ACTION: The guidelines will go back to the TRC for revisions and clarification following extensive review and comment by EOC. It will return to EOC, along with an instructional memorandum, for approval and distribution.

4. **Update on Special Provision for Traffic Control Quality and Compliance Pilot Program (See December 8, 2003, Minutes, New Business, Item 2) – B. Zimmerman**

The special provision was last amended and approved at the December 2003 EOC meeting. Penalties are incorporated when traffic control is found to be non-compliant or non-conforming. Corrections must be made in a timely manner – usually within four hours. Pilot projects were approved for the 2004 construction season. Based on the success of those projects, it is recommended that the special provision be applied to 42 projects in 2005 and be expanded to all projects in 2006.

ACTION: The recommendation is approved.

NEW BUSINESS

1. **Access Management – J. Culp and M. Bott**

EOC approved the revised Traffic and Safety Notes on August 5, 2004. It was recommended that a new note be developed to provide guidance on access management. Traffic and Safety Note 612A was drafted and reviewed by EOC. Several comments and suggestions were made, including the need for further review by the regions and industry for their general awareness and use with consultants.

ACTION: Revisions and clarifications will be made. Follow-up reviews will be conducted, as necessary, before the note is returned to EOC for approval.

2. **Pavement Selections – D. Weber**

A. **US-127 Reconstruct: CS 33035, JN 60540**

The rehabilitation alternates considered were an HMA overlay over rubblized concrete (Alternate 1 – Equivalent Uniform Annual Cost [EUAC] \$40,174/directional mile) and a JPCP unbonded concrete overlay (Alternate 2 – EUAC \$52,398/directional mile).

A life cycle cost analysis was performed and Alternate 1 was approved based on having the lowest EUAC. The HMA overlay design and cost analysis are as follows:

1.5" (38.1mm).....	HMA 5E10, Top Course (Mainline & Inside Shoulder)
2.0" (50.4mm).....	HMA 4E10, Leveling Course (Mainline & Inside Shoulder)
3.0" (76.2mm).....	HMA 3E10, Base Course (Mainline & Inside Shoulder)
6.5" (165.1mm).....	HMA 4C, 3C, and 2C (Outside Shoulder)
9" (228.6mm).....	Rubblized Concrete
18" (457.2mm).....	Existing Aggregate Base and Sand Subbase (Mainline & Shoulders)
	Underdrain System
33.5" (850.9mm).....	Total Thickness

Present Value Initial Construction Costs	\$378,349/mile
Present Value Initial User Costs	\$65,186/mile
Present Value Maintenance Costs.....	\$107,311/mile
Equivalent Uniform Annual Cost	\$40,174/mile

B. I-75/I-96 Ambassador Bridge Gateway Reconstruct: CS 82124-82194, JN 37795

The proposed reconstruction alternates considered were an HMA pavement (Alternate 1 – EUAC \$535,503/directional mile) and a jointed plain concrete pavement (Alternate 2 – EUAC \$517,548/directional mile).

A life cycle cost analysis was performed and Alternate 2 was approved based on having the lowest EUAC. The jointed plain concrete design and cost analysis are as follows:

13” (330.2mm).....	Jointed Plain Concrete Pavement (16’ jt. spacing) (Mainline and Outside Shoulder)
9” (330.2mm).....	Jointed Plain Concrete Pavement (16’ jt. spacing) (Inside Shoulder)
16” (406.4mm).....	Open Graded Drainage Course (Mainline and Outside Shoulder)
20” (508mm).....	Open Graded Drainage Course (Inside Shoulder)
	Geotextile Separator
	Underdrain System
29” (736.6mm).....	Total Thickness
Present Value Initial Construction Costs	\$1,475,705/mile
Present Value Initial User Costs	\$6,762,653/mile
Present Value Maintenance Costs.....	\$124,362/mile
Equivalent Uniform Annual Cost	\$517,548/mile

3. Bureau of Highway Instructional Memorandum (BOH IM) 2004-25, C&T Support Area Procedures Manuals – 2004 Annual Updates – J. W. Reincke

The Construction and Technology Support Area has completed its annual update to the procedures manuals listed below. BOH IM 2004-25 has been written and is ready for signature and distribution upon approval.

- Density Control Handbook
- File Manual for Construction Records
- HMA Production Manual
- Michigan Test Methods
- Materials Quality Assurance Procedures Manual
- Michigan Structure Inventory and Appraisal Coding Guide
- Construction Manual

ACTION: The updates and revisions to the Construction and Technology Support Area’s procedures manuals are approved. The IM was signed and will be distributed.

4. Jointed Plain Concrete Pavement (JPCP) – C. Bleech

The Pavement Committee recommends that an implementation plan be developed for adopting JPCP as our standard PCC pavement type.

We have been constructing JPCPs since 1994 and now have sufficient in-service performance history to develop performance curves. We specify JPCP on nearly all reconstruction projects and on unbonded concrete overlay projects. We continue to address transverse cracking problems through forensic investigations, revised specifications, and design modifications.

The concrete paving industry strongly suggests the use of JPCP.

ACTION: The recommendation to develop an implementation plan for adopting JPCP as our standard PCC pavement type is approved. The plan will be developed in the coming months and returned to EOC for approval.

5. **HMA Operations Committee – M. Chaput**

The HMA Operations Committee has been formed as a steering committee to provide oversight and continuity of all the existing subcommittees or action teams working on HMA issues. Its primary focus is to identify and resolve strategic HMA issues to ensure delivery of the highest quality product.

A draft guidance document was presented for review and comment. Several comments and suggestions were made.

ACTION: The guidance document will be revised to include EOC's comments and will return for approval at the November meeting.

(Signed Copy on File at C&T)

Jon W. Reincke, Secretary
Engineering Operations Committee

JWR:kar

cc:	G. J. Jeff	S. Mortel	J. Steele (FHWA)
	K. Steudle	D. Jackson	A. C. Milo (MRBA)
	L. Hank	W. Tansil	G. Bukoski (MRBA)
	EOC Members	D. Wresinski	R. J. Risser, Jr. (MCPA)
	Region Engineers	C. Libiran	D. Hollingsworth (MCA)
	TSC Managers	R. J. Lippert, Jr.	J. Becsey (MAPA)
	Assoc. Region Engineers	T. L. Nelson	M. Newman (MAA)
	T. Kratofil	T. Phillips	M. Nystrom (AUC)
	M. DeLong	K. Peters	J. Murner (MRPA)
	B. Kohrman	J. Ingle	R. Brenke (ACEC)
	J. Shinn	C&T Staff	